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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,995	03/26/2004	Mi-Sook Nam	10125/4138	8489

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EXAMINER

TON, MINH TOAN T

ART UNIT PAPER NUMBER

2871

DATE MAILED: 12/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/809,995

Applicant(s)

NAM ET AL.

Examiner

Toan Ton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09/28/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 18-26,28-30,36 and 38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-26,28-30,36 and 38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18-26, 28-30, 36 and 38 are rejected under 35 U.S.C. 102(e) as being anticipated by Murai et al (US 2005/0213005) in view of Matsushita et al (US 6885418).

Murai discloses a fabricating method of an array substrate for a transfective liquid crystal display device comprising (see at least Figures 4-17): forming a gate line and a data line on a substrate, the gate line and the data line crossing each other to define a pixel region having reflective and transmissive portions; forming a thin film transistor connected to the gate line and the data line; forming a first passivation layer on the thin film transistor, the first passivation layer having at least one protrusion in the reflective portion; forming an uneven reflective layer (e.g., 8a) on the first passivation layer in the reflective portion that has unevenness at least in part due to the at least one protrusion; and forming a pixel electrode (e.g., 9a) on the first passivation layer; providing a second substrate having a color filter layer (e.g., 24), each color of the color filter layer having regions corresponding in dimension and arrangement to the reflective and transmissive portions of a pixel region, the second substrate further comprising an overcoat layer (e.g. 25) on the color filter layer, a surface of the overcoat layer having a recess portion in the transmissive region; a common electrode (21) on the surface of the overcoat layer; and disposing

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the first substrate such that reflective and transmissive portions of the first substrate oppose the corresponding regions of the second substrate.

The limitation not disclosed by Murai is the color filter layer having at least one through hole in the reflective portion. Matsushita discloses a transflective type LCD device comprising the color filter including openings in the reflection region for achieving advantages such as dispersing bright regions across each pixel that results in improving the visibility (see at least col. 3, lines 50-55). Therefore, it would have been at least obvious to one of ordinary skill in the art at the time the invention was made to employ the color filter for achieving advantages such as dispersing bright regions across each pixel that results in improving the visibility.

Murai discloses the method comprising the reflective layer including one of aluminum and aluminum alloy (see at least col. 3, [068]).

Murai discloses the first passivation layer (e.g., 7a) comprising resin.

Murai discloses thickness' characteristics in the liquid crystal layer in the transmissive and in reflective portions (see at least Figures 4-17).

Murai discloses no protrusions formed in the transmissive portion (see at least Figure 11D).

The use of a passivation layer between the pixel electrode and the reflective layer is common and known in the art, wherein materials such as inorganic insulator (e.g., SiO) and organic insulator (e.g., BCB, resin) for achieving advantages such as minimizing oxidation to the reflective layer. Therefore, it would have been at least obvious to one of ordinary skill in the art at the time the invention was made to employ a passivation layer (e.g., organic, inorganic

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insulator) between the pixel electrode and the reflective layer for achieving advantages such as minimizing oxidation to the reflective layer. Further, the contact hole through insulating layers is required so that the pixel electrode makes contact with the thin film transistor.

***Response to Arguments***


2. Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

***Contact Information***

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan Ton whose telephone number is (571) 272-2303.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

November 17, 2006

  
TOANTON  
PRIMARY EXAMINER